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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,437	01/20/2004	Masoud Medizade	UT01152004	9186

31105 7590 09/10/2007

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EXAMINER	
SHECHTMAN, SEAN P	

ART UNIT	PAPER NUMBER
2125	

MAIL DATE	DELIVERY MODE
09/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,437	MEDIZADE ET AL.	
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/9/07;1/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-38 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "low" in claim 8, 19 is a relative term which renders the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The range has been rendered indefinite by the use of the term low.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,732,776 to Tubel et al (hereinafter referred to as Tubel).

Referring to claim 32, Tubel teaches a computer program product embodied in a tangible form readable by a processor having executable instructions stored thereon for causing said processor to:

monitor flow signals generated by a flow transducer (Col. 4, lines 49-63; Col. 14, lines 60 – Col. 15, line 13);

accumulate at least a portion of said flow signals in a memory coupled to said processor (Col. 15, lines 14-22),

output said accumulated flow signals in a format useful for optimizing fluid extraction from geological strata using a pump (Col. 28- Col. 29, claim 1, Col. 29, claims 8 and 13),

transmit a control signal to an electromagnetically coupled motor controller if said flow signals fall outside a predetermined range or predetermined set point (Col. 14, lines 1-7; Col. 14, lines 25-59; Col. 15, lines 1-14; Col. 27, lines 50 – Col. 28, line 25);

transfer at least a portion of said accumulated flow signals to another processor (Col. 12, lines 40-65).

33, 34. The computer program product according to claim 32 wherein said tangible form comprises magnetic media, optical media or logical media; wherein said executable instructions are stored in a code format comprising byte code, compiled, interpreted, compliable and interpretable (Col. 15, lines 50 - Col. 16, line 58).

4. Claims 1, 3, 5, 7-10, 12, 15-21, 24-31, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,006,044 to Walker, Sr. et al (hereinafter referred to as Walker), provided by applicant.

Referring to claim 1, 12, 21, 35, Walker teaches a method for monitoring and optimizing fluid extraction from geological strata comprising:

coupling a flow transducer to a check valve operatively coupled to a discharge conduit associated with a pump (Col. 22, line 56 – Col. 23, line 14), wherein said flow transducer is adapted to generate flow signals by detecting movement of an element associated with said check valve (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21),

electromagnetically coupling said flow transducer to a local processing system (Fig. 12, fluid sensor microprocessor),

monitoring said flow signals at least during operation of said pump (Col. 55, lines 39-42),

accumulating at least a portion of said flow signals in a memory associated with said local processing system (Col. 55, lines 6-24; Col. 56, lines 33-49), and

determining an optimum pumping cycle from said accumulated flow signals (Col. 23, lines 44-50; Col. 55, lines 34-55, Col. 56, lines 49-62).

3, 16, 17, 21. The method according to claim 1 further including; electromagnetically coupling a motor controller associated with said pump to said local processing system, generating a control signal if said flow signals fall outside a predetermined range or predetermined set point, and sending said control signal to said motor controller; wherein said motor controller changes an operating state of said pump upon receipt of said control signal (Fig. 2, motor control; Col. 22, lines 56-68).

5, 15. The method according to claim 1 wherein said flow transducer generates said flow signals based at least in part on one of, variable reluctance effects, Hall effects, magnetic

inductance effects, binary switch states, potentiometer outputs or piezoelectric effects (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

7, 18, 25. The method according to claim 3 wherein said operating state includes turning said pump on or off (Col. 55, lines 34-55, Col. 56, lines 49-62).

8, 19. The method according to claim 3 wherein said predetermined range includes low or loss of fluid flow (Col. 55, lines 34-55, Col. 56, lines 49-62).

9, 20. The method according to claim 3 wherein said predetermined set point includes a flow duration in which said pump has been operating or idle (Col. 55, lines 34-55, Col. 56, lines 49-62).

10. The method according to claim 1 wherein said position detectable element of said check valve includes means for stimulating said flow transducer to generate said flow signals coincident with said movement (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

Referring to claims 12, 21, Walker teaches a flow transducer coupled to a check valve and adapted to generate flow signals by detection of flow induced movement of a position detectable element internal to said check valve (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21), wherein said check valve is operatively coupled to a discharge conduit associated with a positive displacement pump (Col. 16, lines 44-67).

24. The system according to claim 21 wherein said position detectable element includes at least one permanent magnet attached thereto and configured to stimulate said flow transducer to generate said flow signals coincident with flow induced movement of said position detectable element (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

26. The system according to claim 25 wherein said optimum pumping cycle is used to at least modify said programmed pumping cycle (Col. 56, lines 6-63).

27. The system according to claim 25 wherein said programmed pumping cycle is modified manually by an operator (Fig. 2, manual input controls).

28. The system according to claim 25 wherein said programmed pumping cycle is modified automatically by either said local processing system (Col. 56, lines 6-63).

30. The system according to claim 21 where said transferring occurs automatically based at least in part on one of; time, in response to a transfer request or in response to an event (Fig. 2, Col. 22, lines 56-68).

31. The system according to claim 21 wherein said control command is generated based at least in part on one of: time or in response to an event (Fig. 2, motor control; Col. 22, lines 56-68).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,937,923 to Bassett (hereinafter referred to as Bassett) in view of U.S. Pat. No. 5,006,044 to Walker Sr. et al (hereinafter referred to as Walker) and/or in view of U.S. Pub. No. 2002/0017399 to Schultz et al (hereinafter referred to as Schultz).

Referring to claim 1, 11, 12, 21, 32, 35, 37, Bassett teaches monitoring and optimizing fluid extraction from geological strata (Col. 1, lines 13-41) comprising:

coupling a flow transducer to a valve operatively coupled to a discharge conduit associated with a pump, wherein said flow transducer is adapted to generate flow signals (Col. 5, lines 19-34),

coupling said flow transducer to a local processing system (Col. 5, lines 58-62),

monitoring said flow signals at least during operation of said pump (Col. 4, lines 4-27; Col. 5, lines 1-17),

accumulating at least a portion of said flow signals in a memory associated with said local processing system (Col. 5, lines 19-34; Col. 6, line 51- Col. 7,line 47), and

determining an optimum pumping cycle from said accumulated flow signals (Col. 7, lines 1-8; Col. 3, lines 56-62; Col. 9, lines 10-43. the examiner respectfully submits the pump operating up to an expiration of a delay period given to correct an undesirable condition is an optimum pumping cycle).

3, 16, 17, 21 + . The method according to claim 1 further including; electromagnetically coupling a motor controller associated with said pump to said local processing system (Col. 4,

lines 4-36; Col. 6 lines 19-32; Col. 4, lines 59-60), generating a control signal if said flow signals fall outside a predetermined range or predetermined set point, and sending said control signal to said motor controller; wherein said motor controller changes an operating state of said pump upon receipt of said control signal (Col. 9, lines 10-33).

7, 18, 25 + . The method according to claim 3 wherein said operating state includes turning said pump on or off (Col. 9, lines 10-33;).

8, 19 + . The method according to claim 3 wherein said predetermined range includes low or loss of fluid flow (Col. 7, lines 1-19).

9, 20 + . The method according to claim 3 wherein said predetermined set point includes a flow duration in which said pump has been operating or idle (Col. 7, lines 1-19).

Referring to claims 12, 21, Bassett teaches wherein the valve is operatively coupled to a discharge conduit associated with a positive displacement pump (Col. 4, lines 4-17).

25 + . The system according to claim 21 wherein said motor controller further includes timer means for turning said positive displacement pump on or off in accordance with a programmed pumping cycle (Col. 4, lines 37-58; Col. 9, lines 10-43).

26 + . The system according to claim 25 wherein said optimum pumping cycle is used to at least modify said programmed pumping cycle (Col. 9, lines 10-43).

27 + . The system according to claim 25 wherein said programmed pumping cycle is modified manually by an operator (Col. 4, lines 37-58).

28 + . The system according to claim 25 wherein said programmed pumping cycle is modified automatically by said local processing system (Col. 4, lines 37-58).

30, 31 +. The system according to claim 21 where said transferring occurs automatically based at least in part on one of; time, in response to a transfer request or in response to an event; wherein said control command is generated based at least in part on one of: time or in response to an event (Col. 7, lines 1-19).

23 + . The system according to claim 22 wherein said network is a wireless telecommunications network (Col. 6, lines 32-37).

33. The computer program product according to claim 32 wherein said tangible form comprises magnetic media, optical media or logical media; wherein said executable instructions are stored in a code format comprising byte code, compiled, interpreted, compliable and interpretable (Col. 6, lines 51 – Col. 7, lines 48).

Bassett teaches all of the limitations set forth above, however fails to teach a flow transducer coupled to a inline check valve and adapted to generate flow signals by detection of flow induced movement of a position detectable element internal to said check valve; electromagnetically coupling said flow transducer to a local supervisory control system; wherein said flow transducer generates said flow signals based at least in part on one of, variable reluctance effects, Hall effects, magnetic inductance effects, binary switch states, potentiometer outputs or piezoelectric effects; wherein said position detectable element includes at least one permanent magnet attached thereto and configured to stimulate said flow transducer to generate said flow signals coincident with flow induced movement of said position detectable element.

However, Walker teaches a flow transducer coupled to a inline check valve and adapted to generate flow signals by detection of flow induced movement of a position detectable element

internal to said check valve; electromagnetically coupling said flow transducer to a local supervisory control system; wherein said flow transducer generates said flow signals based at least in part on one of, variable reluctance effects, Hall effects, magnetic inductance effects, binary switch states, potentiometer outputs or piezoelectric effects; wherein said position detectable element includes at least one permanent magnet attached thereto and configured to stimulate said flow transducer to generate said flow signals coincident with flow induced movement of said position detectable element (Fig. 2, element 48; Fig. 6; Col. 26, lines 24-34; Col. 56, lines 63 – Col. 57, line 21).

Bassett and Walker are analogous art because they are from the same field of endeavor, oil well production.

Because both Bassett and Walker teach flow sensors, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to substitute one sensor for the other to achieve the predictable results of sensing flow.

Referring to claims 2, 4, 6, 11, 13, 14, 22, 36-38, Bassett teaches all of the limitations set forth above, however fails to teach another processing system is in processing communications over a network with at least said local processing system and includes means for; receiving said accumulated flow signals from said network; retrievably storing at least a portion of said accumulated flow signals in a data store; determining an optimum pumping cycle from said accumulated flow signals; generating said control command; sending said control command to at least said local processing system; and outputting said optimum pumping cycle in a format useful for optimizing fluid extraction from said geological strata using the pump; wherein said another

processing system further includes means for heuristically determining said optimum pumping cycle; wherein said transferring is accomplished using an electronic transport medium, wherein said electronic transport medium comprises one of, a telecommunications link, a laptop computer, a personal data assistant, or a data logging device.

However, referring to claims 2, 4, 6, 11, 13, 14, 22, 36-38, Schultz another processing system is in processing communications over a network with at least a local processing system and includes means for; receiving accumulated flow signals from said network; retrievably storing at least a portion of said accumulated flow signals in a data store; determining an optimum pumping cycle from said accumulated flow signals; generating control command; sending said control command to at least said local processing system; and outputting said optimum pumping cycle in a format useful for optimizing fluid extraction from said geological strata using the pump; wherein said another processing system further includes means for heuristically determining said optimum pumping cycle; wherein said transferring is accomplished using an electronic transport medium, wherein said electronic transport medium comprises one of, a telecommunications link, a laptop computer, a personal data assistant, or a data logging device (Page 3, paragraph 44; Page 4, paragraph 52; Page 4, paragraph 49; Pages 5-6, claim 14).

Bassett and Schultz are analogous art because they are from the same field of endeavor, well production.

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the system of Bassett, which includes a network for remote access, with the remote access and control system of Schultz.

One of ordinary skill in the art would have been motivated to combine these references since Bassett teaches a network for remote access, because Schultz teaches the webserver 234 supports a web page on the Internet 246, which may be accessed by a person at a remote location with a connection to the Internet and n this manner, the person at the remote location may monitor the signals generated by the sensors 236, 238, 240 and may operate the test equipment 244 to thereby test the functionality of the well tool 228 and/or diagnose a problem encountered in testing the tool (Page 5, paragraph 67). Furthermore, Schultz teaches a well monitoring and control system is provided which utilizes the Internet or other network to permit remote monitoring and control of aspects of the well (paragraph 6). Furthermore, Schultz teaches a well tool is provided that includes a sensor and/or an actuator, wherein if a sensor is used, signals generated by the sensor are accessible at a remote location via the network and if an actuator is used, the actuator is controllable from the remote location via the network, such that multiple well tools may be used in a well and the well tools may be independently monitored and/or controlled via a network connected to the webserver (paragraphs 7-8). Furthermore, Schultz teaches surface equipment associated with a well may be monitored and/or controlled from a remote location using a system provided herein (paragraph 9). Furthermore, Schultz teaches a well tool may be tested from a remote location using a system and method provided herein, such that test equipment maybe operated remotely, for example, to apply pressure to the tool, via the network. Furthermore, Schultz teaches various methods may be utilized for communicating between the webserver and the network, wherein if a fiber optic line is used, a cable is provided that is uniquely suited for use in a subterranean well (paragraphs 10-12).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman 

August 29, 2007 8/29/07